

REMARKS

Claims 1, 3, 5, 6, 10 and 11 are pending in this application. Claim 3 has been amended and claim 9 has been canceled herein without prejudice or disclaimer.

Applicants are pleased to note the Examiner indicated in the Advisory Action dated October 30, 2003 that claim 3 would be allowable if submitted in a separate, timely filed amendment. Applicants respectfully submit that claim 3 is allowable upon entry of the October 24, 2003 Amendment. Applicants also note that the Advisory Action indicated that claim 6 would be allowable if rewritten in independent form including the limitations of base claim 1.

Applicants have added claims 10 and 11. Claim 10 depends from claim 5 and further recites the limitation “wherein a flatness of the dielectrically separated wafer is less than 0.2 μm as the absolute roughness between a maximum height and a minimum height,” which is recited in allowed claim 3. Therefore, Applicants respectfully submit that claim 10 is patentable.

Claim 11 depends from claim 5 and further recites “wherein a surface area of each of the monocrystalline silicon islands is maximized such that said monocrystalline silicon islands occupy substantially said wafer surface.” Support for claim 11 can be found throughout the original disclosure. For example, Applicants direct the Examiner’s attention to page 18, lines 25-31 and page 38, line 1-9 of the specification. Applicants respectfully submit that none of the relied upon prior art Ohta et al. and Katayama et al. discloses, teaches or suggests “a surface area of each of the monocrystalline silicon islands is maximized such that said monocrystalline silicon islands occupy substantially said wafer surface.” Therefore, Applicants respectfully submit that claim 11 is patentable.

Claim Rejection – 35 USC § 102 and 35 USC § 103

Claims 1 and 5 were rejected under 35 U.S.C. 102(b) over Ohta et al. (EP 0493116). Applicants respectfully traverse this rejection for at least the following reasons.

Claim 1 recites, *inter-alia*, “A dielectrically separated wafer having a plurality of dielectrically separated monocrystalline silicon islands mutually defined by a dielectrically separating oxide film on a surface of the wafer...” Claim 5 recites, *inter-alia*, “A dielectrically separated wafer having a plurality of dielectrically separated monocrystalline

silicon islands ^{per se} insulated by a dielectrically separating oxide film on the wafer surface, the dielectrically separated wafer comprises a surface between one dielectrically separated silicon island and another neighboring dielectrically separated silicon island formed so as to be flat.”

It is respectfully submitted that the grinding method of Ohta et al. cannot prevent the formation of an indentation 16a and a projection 16b having a step of approximately 0.3 μm or larger in a border of polysilicon layer 16 of Ohta et al. Applicants submit that the grinding method of Ohta et al. is conventional and most likely uses a grinding wheel having grinding abrasives thereon, such as a diamond powder. When a surface of a single crystal silicon is ground according to a conventional grinding method, there may be a problem in that a grinding mark may be left on the surface of a single crystal silicon. Furthermore, the use of a grinding wheel has drawbacks. For example, the grinding wheel may be crushed when the grinding wheel gets in contact with an oxide layer. Consequently, the grinding method of Ohta et al. cannot achieve a flatness less than 0.2 μm .

In order to circumvent the above problems, a single crystal silicon wafer (10) is ground to only a certain extent and the surface is finished by a polishing method (see, for example, page 27, lines 22-26 in the specification). In this way, the present invention achieves a surface flatness of less than 0.2 μm .

Consequently, Ohta et al. does not disclose, teach or suggest the subject matter recited in claims 1 and 5.

Therefore, the Applicants respectfully submit that claim 1 and claim 5 are patentable and request that the §102 rejection of claims 1 and 5 be withdrawn.

CONCLUSION

In view of the foregoing, the claims are now in form for allowance, and such action is hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, he is kindly requested to contact the undersigned at the telephone number listed below.

All objections and rejections having been addressed, it is respectfully submitted that the present application is in a condition for allowance and a Notice to that effect is earnestly solicited.

Respectfully submitted,

Pillsbury Winthrop LLP

By: 

John P. Darling

Reg. No. 44,482

Tel. No.: (703) 905-2045

Fax No.: (703) 905-2500

JPD/KG

00909

P.O. BOX 10500

McLean, Virginia 22102